



**Colorado Department
of Public Health
and Environment**

OPERATING PERMIT

**TXI Operations, LP
Boulder Plant**

First Issued: January 1, 2004

Renewed: November 1, 2011

AIR POLLUTION CONTROL DIVISION

COLORADO OPERATING PERMIT

FACILITY NAME:	TXI Operations, LP Boulder Plant	OPERATING PERMIT NUMBER
FACILITY ID:	059/0409	950PJE084
RENEWED:	November 1, 2011	
EXPIRATION DATE:	November 1, 2016	
MODIFICATIONS:	See Appendix F of Permit	

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

ISSUED TO:	PLANT SITE LOCATION:
TXI Operations, LP	Boulder Plant
P.O. Box 553	11728 Highway 93
Riverside, CA 92501	Boulder, CO 80303
	Jefferson County

INFORMATION RELIED UPON

Operating Permit Renewal Application Received: December 27, 2007
And Additional Information Received:

Nature of Business: Lightweight aggregate production
Primary SIC: 3295

RESPONSIBLE OFFICIAL

Name: Clarence R. Moulton
Title: Plant Manager

FACILITY CONTACT PERSON

Name: Jean Brewster
Title: Environmental Manager

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SUBMITTAL DEADLINES –

First Semi-Annual Monitoring Period:	November 1, 2011 – December 31, 2011
Semi-Annual Monitoring Periods:	January 1 – June 30, July 1 – December 31
Semi-Annual Monitoring Reports:	Due February 1 & August 1, 2012 & subsequent years
First Annual Compliance Period:	November 1, 2011 – December 31, 2011
Annual Compliance Periods:	January 1 – December 31
Annual Compliance Certification:	Due February 1, 2012 & subsequent years

Note that the Semi-Annual Monitoring Reports and Annual Compliance report must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports.

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SECTION I - General Activities and Summary

1. Permitted Activities

- 1.1 This facility consists of a shale quarry, shale crushers, conveyors, raw material and product storage silos, kiln and product processing and handling facilities. Kiln fuel is primarily coal with natural gas available as back-up. Pollution control equipment consists of a baghouse and lime scrubber to treat kiln exhaust air, and baghouses at the shale secondary crusher, shale silos, product cooler, product crusher, product screening, product transfer points and product silos. Coal is received by rail and stored on the plant site. Coarse finished product is also stockpiled on-site. Fugitive emissions at the quarry and plant are controlled by watering and other procedures.

The facility is located in the area of Superior, Colorado on Highway 93, just south of the Jefferson-Boulder County line. The Denver Metro Area is classified as attainment/maintenance for particulate matter less than 10 microns in diameter (PM₁₀) and carbon monoxide (CO). Under that classification, all SIP-approved requirements for PM₁₀ and CO will continue to apply in order to prevent backsliding under the provisions of Section 110(l) of the Federal Clean Air Act. The Denver Metro Area is classified as non-attainment for ozone and is part of the 8-hr Ozone Control Area as defined in Regulation No. 7, Section II.A.1.

There are no affected states within 50 miles of the plant. Rocky Mountain National Park, Rawah Wilderness Area and Eagles Nest Wilderness Area are Federal Class I designated areas within 100 kilometers of the plant.

- 1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.
- 1.3 The Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review requirements of Part B. Any revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for purposes of this Operating Permit and shall survive reissuance. This permit incorporates the applicable requirements (except as noted in Section II) from the following construction permits: 88JE372-1, 88JE372-2, 88JE372-3, 88JE372-4, 88JE372-6, 88JE372-7, 88JE372-8, 88JE372-10, 99JE0730, 00JE0504, 00JE0505, 00JE0803.
- 1.4 All conditions in this permit are enforceable by US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Section III – Conditions 5.3.1 and 6.3.1 and Section IV - Conditions 3.d, 3.g (last paragraph), 14 and 18 (as noted).

- 1.5 All information gathered pursuant to the requirements of this permit is subject to the Recordkeeping and Reporting requirements listed under Condition 22 of the General Conditions in Section IV of this permit. Either electronic or hard copy records are acceptable.

2. Alternative Operating Scenarios

- 2.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.

2.1.1 No separate operating scenarios have been specified.

3. Non-Attainment New Source Review (NANSR) and Prevention of Significant Deterioration (PSD)

- 3.1 This facility is categorized as a NANSR major stationary source (Potential to Emit of $\text{NO}_x \geq 100$ Tons/Year). Future modifications at this facility resulting in a significant net emissions increase (see Reg 3, Part D, Sections II.A.26 and 42) for VOC or NO_x or a modification which is major by itself (i.e. a Potential to Emit of ≥ 100 TPY of either VOC or NO_x) may result in the application of the NANSR review requirements.

Based on the information provided by the applicant, this source is categorized as a minor stationary source for PSD as of the issue date of this permit. Any future modification which is major by itself (Potential to Emit of ≥ 250 TPY) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements

- 3.2 There are no other Operating Permits associated with this facility for purposes of determining applicability of Prevention of Significant Deterioration regulations.

4. Accidental Release Prevention Program (112(r))

- 4.1 Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (section 112(r) of the Federal Clean Air Act)

5. Compliance Assurance Monitoring (CAM)

- 5.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

Rotary Kiln (P001), Product Cooler (P002), Secondary Shale Crushing (P003), Raw Shale Storage Silos (P004), Product Silos (P006), Product Crushing/Screening (P007), New Kiln Dust Silo (P012), and Kiln Dust Silo (P018) for PM.

The Rotary Kiln (P001) is not subject to CAM for SO₂ control since at the time the CAM plan was required the Title V permit specified a continuous compliance determination method (40 CFR Part 64 § 64.2(b)(1)(vi), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

6. Summary of Emission Units

6.1 The emissions units regulated by this permit are the following:

Facility ID	AIRS ID	Description	Pollution Control	Construction Permit
P001	001	Rotary kiln, 12' Diameter by 240' long, 100 MMBtu/hr	Baghouse - Mikro PU Model 1400S-12-TRH-C, SN 900122H2 Scrubber - Dulow Model A-5	88JE372-1
P002	002	Product cooler, 100 tons/hour	Baghouse - Mikro Pul Model 1400J-12-TRH-C, SN 700122H1	88JE372-2
P003	003	Raw shale secondary crusher and screens, 250 tons/hour	Baghouse - W.W. Sly, PC No. 207-6, SN JP2-7612	88JE372-3
P004	004	Raw Shale Storage Silos – Conveyor discharge & silo transfers and screening, 250 tons/hour	Baghouse-WW Sly, PC No. 208-6, SN JP2-7613	88JE372-4
P006	006	Product Silos -Load-in and screens, 100 tons/hour	Wheelabrator DC-9 Model #36 Size 150	88JE372-6
P007	007	Product crushing/screening, ----- National Vertical Shaft Impactor, Model 43 and Southeast Crushers Model 46-18-VSI, SN EJRT-G-6/97-002, 100 ton per hour each ----- Missouri Robinson T-3636-R-23 roll crusher, 100 tons per hour, SN FSN-3820-788-5999 Primary & Secondary screens ----- Conveyor belt drop point and product elevator	Wheelabrator DC-7 Model #36 WCC Size 45SN 20-4177-1 ----- Baghouse - WW Sly, PC No. 221-6, SN JP2-7614 -----Wheelabrator DC-8 Model #36 WCC Size 45, SN 20-4177-2	88JE372-7
P008	008	Scrubber lime feeder, 400 lbs/hr	Baghouse	88JE372-8
P010	010	Mine/Plant fugitive particulate emissions	Dust control plan	88JE372-10
P012	012	New kiln dust silo (75 tons capacity). Load out rate of 2.75 tons per hour	Wheelabrator fabric filter, Model 43WCC Mod 36 Pulse, SN 20-4259	99JE0730
P013	013	Quarry raw shale breaker & hopper, 300 tons/hr	Shale moisture	00JE0504
P014	014	Extruder, 40 tons/hr	Baghouse	00JE0505
P016	016	Product screening, Commander 408, M-60 mobile screen, 200 tons/hr	Shale moisture, spray bars as necessary	00JE0803
P017	017	Solvent cleaners	None	
P018	018	Kiln dust silo (20 tons capacity). Load out rate of 1.5 tons per hour	Wheelabrator fabric filter, Model 36, Size 45, 5500 ACFM	
E013		Emergency Diesel Generator, 485 HP	None	
T027		Gasoline storage tank, 1000 gallon capacity	None	

SECTION II - Specific Permit Terms

1. P001 – Rotary Kiln with Scrubber and Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor		Monitoring	
			Coal ¹ (lb/ton)	NG ² (lb/MMscf)	Method	Interval
NO _x	1.1	248.0 TPY	19.7	706	Recordkeeping & Calculation 12 month rolling total	Monthly
VOC		22.0 TPY	0.8	1.96		
CO		128.4 TPY	8.0	287		
PM	1.2	0.092 g/dscm			One time compliance test	
		17.31P ^{0.16} lb/hr			Recordkeeping & Calculation 12 month rolling total	Monthly
		25.0 TPY	0.0184 lb/ton shale processed ¹			
PM ₁₀		25.0 TPY				
SO ₂	1.3	150.0 TPY	3.0	162		
		1.2 lbs/MMBtu				
Fuel Usage	1.4	Coal: 29,780 TPY Natural Gas: 702.5 MMscf/yr				
Shale Processing	1.5	495,131 TPY				
Opacity	1.6	Not to Exceed 20% Except as Provided for Below			EPA Method 9	See Condition 1.6
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes				
Stack Height	1.7	≥ 100 ft above ground			One time	
Stack Test	1.8				Stack Testing	Five (5) years
pH System	1.9				See Condition 1.9	
CAM	1.10	See Condition 1.10			See Condition 1.10	
NSPS Subpart UUU	1.11	See Condition 1.11			See Condition 1.11	
NSPS Subpart A	1.12	See Condition 1.12			See Condition 1.12	

¹EFs from 2008 stack test

²EFs from 2002 stack test

- 1.1 Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOC) and Carbon Monoxide (CO) emissions from the Rotary Kiln shall not exceed the annual emission limitations identified in the tables above (Colorado Construction Permit 88JE372-1). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton or MMscf)} \times \text{fuel usage (tons or MMscf/mo)}]}{2000 \text{ lbs/ton}}$$

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

1.2 Emissions of Particulate Matter (PM) and particulate matter smaller than 10 microns (PM₁₀) from the Rotary Kiln are subject to the following requirements:

1.2.1 Emissions which contain particulate matter shall not exceed 0.092 g/dscm (40 CFR Part 60 Subpart UUU § 60.732(a), as adopted by reference in Colorado Regulation No. 6, Part A).

1.2.2 PM emissions shall not exceed the short term emission limitations identified in the tables above, where P = process weight rate in tons/hr (Colorado Regulation No. 1, Section III.C.1.a & b). In the absence of credible evidence to the contrary, compliance with the short term emission limitations shall be presumed provided the baghouse is operated and maintained in accordance with the provisions in Condition 12.1 and the emission limits in Condition 1.2.3 are met.

1.2.3 PM and PM₁₀ emissions from the Rotary Kiln shall not exceed the annual emission limitations identified in the tables above (Colorado Construction Permit 88JE372-1). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{shale processed(tons/mo)}]}{2000 \text{ lbs/ton}}$$

The efficiency of the control equipment is included in the emission factor listed. The emissions factors are considered valid provided the baghouse is operation and maintained according to Condition 12.1.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

1.3 Emissions of Sulfur Dioxide (SO₂) from the Rotary Kiln are subject to the following requirements:

1.3.1 Emissions of SO₂ from the Rotary Kiln shall not exceed the annual emission limitations identified in the tables above (Colorado Construction Permit 88JE372-1). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton or MMscf)} \times \text{shale processed (tons or MMscf/mo)}]}{2000 \text{ lbs/ton}}$$

The control efficiency of the scrubber is included in the emission factor listed.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

- 1.3.2 Sulfur Dioxide (SO₂) emissions shall not exceed 1.2 lbs/MMBtu (Colorado Regulation No. 1, Section VI.B.4.a.(ii)). Compliance with this limitation is presumed provided the kiln is in compliance with Condition 1.9.
- 1.3.3 Utilize best practical control technology for control of sulfur dioxide. The Division has determined this to be a fabric filter and wet scrubber. (Colorado Regulation No. 6 III.D.2)
- 1.4 Total annual fuel usage for the Rotary Kiln shall not exceed the annual limitation listed above (Colorado Construction Permit 88JE372-1). Monthly fuel usage rates shall be used in a rolling twelve month total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months of data.
- 1.5 The tons of shale processed through the Rotary Kiln shall not exceed the limitations listed in the tables above (Colorado Construction Permit 88JE372-1). The weight of shale processed shall be determined using belt scales. Monthly processing rates shall be used in a rolling twelve rolling total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months of data.
- 1.6 Visible emissions shall not exceed 20% opacity (Colorado Construction Permit 88JE372-1 and Colorado Regulation No. 1, Section II.A.1) except during startup, process modifications or adjustment or occasional cleaning of control equipment when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with the opacity standards shall be monitored by conducting a visible emission observation daily. If visible emissions are observed, the permittee shall investigate the baghouse performance and make any repairs or adjustments necessary. A daily log shall be kept of the observations and any action taken as a result and shall be made available to the Division upon request. An example log is provided in Appendix G. The log shall also note those days in which a visible emission observation was not made and the reason for no observation. If, after maintenance has been performed, visible emissions persist for longer than one hour, an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard.

Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of these opacity limitations shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

All Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.

- 1.7 The stack height on the Rotary Kiln shall be at least 100 feet above ground level. (Colorado Construction Permit 88JE372-1)
- 1.8 Performance testing for NO_x, SO₂, VOC, CO, and PM₁₀ emissions shall be performed at least every five years using EPA approved testing methods. The tests shall be performed while the kiln is operating at 90% of maximum aggregate production or greater in accordance with the APCD Compliance Test Manual.

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior written approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date (s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The required number of copies of the compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division.

- 1.9 A pH system, as approved by the Division, shall be used to continuously monitor sulfur dioxide emissions in place of a Continuous Emissions Monitoring (CEM) system. The pH monitoring system shall have a backup pH monitor in place and ready for use at all times. The pH of the scrubber liquor shall be maintained higher than a pH of 7 or greater, and the set-point shall be 7.5 or greater. The pH shall be measured as a 15-minute block average of a clock hour. Any 15-minute block average pH value of less than 7 will be considered a deviation from the permit limits for sulfur dioxide. Data for the pH of the scrubber liquor shall be maintained and made available to the Division for inspection upon request. (Construction Permit 88JE372-1, as modified in accordance with Section I, Condition 1.3)

The audit plan, as approved by the Division, shall be used to identify normal operation parameters for such items as pressure drop across the scrubber, pH of the lime slurry, and the rate of lime scrubber liquor circulated through the scrubber. These normal operation parameters must be shown to correlate with stack testing such that scrubber efficiency and emissions may be reasonably estimated. The plan shall be used to demonstrate that when the scrubber is operated within normal parameters, emissions do not exceed those specified in this permit. The audit plan shall be implemented and maintained continuously by the source. (Construction Permit 88JE372-1)

- 1.10 The Rotary Kiln is subject to the Compliance Assurance Monitoring (CAM) requirements with respect to the particulate matter emission limitations in Conditions 1.2. Compliance with the CAM requirements shall be monitored in accordance with the requirements in Condition 13.
- 1.11 The Rotary Kiln is subject to the requirements in 40 CFR Part 60 Subpart UUU, "Standard of Performance for Calciners and Dryers in Mineral Industries", as follows:
- 1.11.1 The wet lime scrubber shall be equipped with monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber. The pressure loss monitoring device must be certified by the manufacturer to be accurate within 5% of water column gauge pressure at the level of operation. The liquid flow rate monitoring device must be certified by the manufacturer to be accurate within 5% of design scrubbing liquid flow rate. (§60.734(d)).
- 1.11.1.1 An arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid shall be determined and recorded daily. (§60.735(b))
- 1.11.2 Submit written reports semiannually of exceedances of control device operating parameters required to be monitored by Condition 1.11.1. The reports may be submitted concurrently with the Title V semi-annual reports. For the purpose of these reports, exceedances are defined as follows: (§60.735(c))
- 1.11.2.1 Any daily 2-hour average of the wet scrubber pressure drop determined as described in Condition 1.11.1.1 that is less than 90 percent of the average value recorded according to §60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard; (§60.735(c)(2)) or
- 1.11.2.2 Each daily wet scrubber liquid flow rate recorded as described in Condition 1.11.1.1 that is less than 80 percent or greater than 120 percent of the average value recorded according to §60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard. (§60.735(c)(3))
- Note: Exceedances of control device operating parameters are not an exceedance of the emission limitation but may be an indication of compromised control device operation and failure to operate the kiln in accordance with good air pollution control practices (§60.11(d)). Although the PM emission limitations do not apply during periods of startup, shutdown and malfunction (§60.8(c)), exceedances of control device operating parameters must be reported during all periods of kiln operation, including periods of startup, shutdown and malfunction. Reports of control device operating parameter exceedances should indicate if such exceedance occurred during periods of startup, shutdown and malfunction.
- 1.11.3 Records of all measurements taken as required by this Condition 1.11 and Condition 1.2.1 shall be retained for at least two years. (§60.735(a))

- 1.12 The Rotary Kiln is subject to the requirements in 40 CFR Part 60 Subpart A, "General Provisions", as follows:
- 1.12.1 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (§60.11(d))
 - 1.12.2 No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. (§60.12)
 - 1.12.3 Records of startups, shutdowns and malfunctions shall be maintained as required under §60.7.
 - 1.12.4 Performance tests shall be conducted in accordance with §60.8.
 - 1.12.5 Compliance with opacity standards shall be demonstrated according to §60.11.

2. P003 – Secondary Shale Crushing with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)		Monitoring	
			Screen & Crush	Convey & Transfer	Method	Interval
PM	2.1	0.05 g/dscm			One time compliance test	
		17.31P ^{0.16} lb/hr			Recordkeeping & Calculation	Monthly
		4.54 TPY	0.0365	0.0147	Recordkeeping & Calculation	
PM ₁₀		2.20 TPY	0.0174	0.0070	12 month rolling total	
Shale Processing	2.2	500,000 TPY				
Opacity	2.3	Not to Exceed 7%			EPA Method 9	See Condition 2.3
		Not to Exceed 20% Except as Provided for Below				
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes				
CAM	2.4	See Condition 2.4			See Condition 2.4	

P004 – Raw Shale Storage Silos with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	2.1	0.05 g/dscm		One time compliance test	
		17.31P ^{0.16} lb/hr		Recordkeeping & Calculation	Monthly
		3.67 TPY	0.0193	Recordkeeping & Calculation 12 month rolling total	
		PM ₁₀	0.0104		
Shale Throughput	2.2	500,000 TPY			
Opacity	2.3	Not to Exceed 7%		EPA Method 9	See Condition 2.3
		Not to Exceed 20% Except as Provided for Below			
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
CAM	2.4	See Condition 2.4		See Condition 2.4	

P006 – Product Silos with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	2.1	0.05 g/dscm		One time compliance test	
		17.31P ^{0.16} lb/hr		Recordkeeping & Calculation	Monthly
		2.45 TPY	0.0128	Recordkeeping & Calculation	
		PM ₁₀	1.32 TPY	0.00695	
Shale Throughput	2.2	380,000 TPY		12 month rolling total	
Opacity	2.3	Not to Exceed 7%		EPA Method 9	See Condition 2.3
		Not to Exceed 20% Except as Provided for Below			
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
CAM	2.4	See Condition 2.4		See Condition 2.4	

P007 – Product Crushing & Screening with Baghouses

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	2.1	0.05 g/dscm		One time compliance test	
		17.31P ^{0.16} lb/hr		Recordkeeping & Calculation	Monthly
		11.38 TPY	0.0599	Recordkeeping & Calculation	
PM ₁₀		6.14 TPY	0.0323	12 month rolling total	
Shale Throughput	2.2	380,000 TPY			
Opacity	2.3	Not to Exceed 7%		EPA Method 9	See Condition 2.3
		Not to Exceed 20% Except as Provided for Below			
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
CAM	2.4	See Condition 2.4		See Condition 2.4	

P012 – New Kiln Dust Silo with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	2.1	0.05 g/dscm		One time compliance test	
		3.59P ^{0.62} lb/hr		Recordkeeping & Calculation	Monthly
		3.25 TPY	0.27	Recordkeeping & Calculation 12 month rolling total	
		PM ₁₀	3.25 TPY		
Shale Throughput	2.2	500,000 TPY			
Opacity	2.3	Not to Exceed 7%		EPA Method 9	See Condition 2.3
		Not to Exceed 20% Except as Provided for Below			
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
CAM	2.4	See Condition 2.4		See Condition 2.4	

P018 – Kiln Dust Silo with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	2.1	0.05 g/dscm		One time compliance test	
		3.59P ^{0.62} lb/hr		Recordkeeping & Calculation	Monthly
		4.51 TPY	0.687	Recordkeeping & Calculation 12 month rolling total	
PM ₁₀		4.51 TPY	0.687		
Shale Throughput	2.2	13,140 TPY			
Opacity	2.3	Not to Exceed 7%		EPA Method 9	See Condition 2.3
		Not to Exceed 20% Except as Provided for Below			
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
CAM	2.4	See Condition 2.4		See Condition 2.4	

2.1 PM and PM₁₀ emissions are subject to the following requirements:

2.1.1 Emissions which contain particulate matter shall not exceed 0.05 g/dscm (40 CFR Part 60 Subpart OOO §§ 60.672(a) and (e)(2), as adopted by reference in Colorado Regulation No. 6, Part A). This particulate matter emission limit applies to **each stack** for the

Secondary Shale Crushing, Raw Shale Storage Silos, Product Silos, Product Crushing & Screening, New Kiln Dust Silo and Kiln Dust Silo. In the absence of credible evidence to the contrary, compliance with the particulate matter limitations shall be presumed provided the baghouses are operated and maintained in accordance with the requirements in Condition 12.1.

2.1.2 PM emissions from Secondary Shale Crushing, Raw Shale Storage Silos, Product Silos, Product Crushing & Screening, New Kiln Dust Silo and Kiln Dust Silo shall not exceed the short term emission limitations (lbs/hr), where P = process weight rate in tons/hr identified in the tables above (Colorado Regulation No. 1, Section III.C.1.a & b). In the absence of credible evidence to the contrary, compliance with the short term emission limitations shall be presumed provided the baghouses are operated and maintained in accordance with the provisions in Condition 12.1 and the emission limits in Condition 2.1.3 are met.

2.1.3 PM and PM₁₀ emissions from Secondary Shale Crushing, Raw Shale Storage Silos, Product Silos, Product Crushing & Screening, New Kiln Dust Silo and Kiln Dust Silo shall not exceed the long term emission limitations (tons/yr) identified in the tables above (Colorado Construction Permits 88JE372-3, 88JE372-4, 88JE372-6, 88JE372-7, and 99JE0730, as modified under the provisions of Section I, Condition 1.3). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{shale processed (tons/mo)}]}{2000 \text{ lbs/ton}}$$

The appropriate efficiencies for control equipment are included in the listed emissions factors. These emission factors are to be considered valid provided the baghouses are maintained and operated according to the requirements in Condition 12.1.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

2.2 The tons of shale processed through Secondary Shale Crushing, Raw Shale Storage Silos, Product Silos, Product Crushing & Screening, New Kiln Dust Silo and Kiln Dust Silo shall not exceed the limitations listed in the tables above (Colorado Construction Permits 88JE372-3, 88JE372-4, 88JE372-6, 88JE372-7, and 99JE0730). The weight of shale processed shall be determined from belt scales, hauled loads, or other Division approved methods. Monthly processing rates shall be used in a rolling twelve month total to monitor compliance with the ton per year limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

2.3 Opacity of emissions from Secondary Shale Crushing, Raw Shale Storage Silos, Product Silos, Product Crushing & Screening, New Kiln Dust Silo and Kiln Dust Silo are subject to the following requirements:

- 2.3.1 Visible emissions shall not exceed 7% opacity (Colorado Construction Permits 88JE372-3, 88JE372-4, 88JE372-6, 88JE372-7, 99JE0730 and 40 CFR Part 60 Subpart OOO § 60.672(a) and (e)(2), as adopted by reference in Colorado Regulation No. 6, Part A). Compliance with the opacity limitations shall be monitored by conducting visible emission observations daily. Visible emission observations shall be conducted as specified in the CAM plan in Appendix G.

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part A).

Note that this opacity requirement is more stringent than the opacity requirements in Conditions 2.3.2 during all times except during startup, shutdown and malfunction.

- 2.3.2 Visible emissions shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1) except during periods of startup, process modifications or adjustment or occasional cleaning of control equipment when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with the opacity limits shall be monitored as follows:

- 2.3.3 A non-Method 9 visible emission observation shall be conducted daily. If any visible emissions are observed, the permittee shall investigate the baghouse performance and make any repairs or adjustments necessary. A daily log shall be kept of the observations and any action taken as a result and such log shall be made available to the Division upon request. An example log is provided in Appendix G. If, after maintenance has been performed, visible emissions persist for longer than one hour, an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard. The EPA Reference Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification.
- 2.4 Secondary Shale Crushing, Raw Shale Storage Silos, Product Silos, Product Crushing & Screening, New Kiln Dust Silo and Kiln Dust Silo are subject to the Compliance Assurance Monitoring (CAM) requirements with respect to the PM emission limitations in Conditions 2.1.1, 2.1.2 and 2.1.3 and the PM₁₀ emission limitations in Condition 2.1.2. Compliance with the CAM requirements shall be monitored in accordance with the requirements in Condition 13.

3. P013 – Primary Shale Crushing

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)		Monitoring	
			Hopper	Crusher*	Method	Interval
PM	3.1	17.31P ^{0.16} lb/hr			Recordkeeping & Calculation	Monthly
		0.73 TPY	0.00039	0.005	Recordkeeping & Calculation	
PM ₁₀		0.35 TPY	0.00018	0.0024	12 month rolling total	
Shale Processing	3.2	500,000 TPY				
Opacity	3.3	Not to Exceed 15%			EPA Method 9	See Condition 3.3
		Not to Exceed 20% Except as Provided for Below				
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes				

*The emission factors for the crusher include a control efficiency of 50% accounting for shale moisture.

3.1 PM and PM₁₀ emissions are subject to the following requirements:

3.1.1 PM emissions from Primary Shale Crushing shall not exceed the short term emission limitations (lbs/hr), where P = process weight rate in tons/hr identified in the tables above (Colorado Regulation No. 1, Section III.C.1.a & b). Average hourly emissions shall be calculated monthly from the calculated monthly emissions, as required by Condition 3.1.2, divided by the monthly hours of operation. Records of the hours of operation and hourly emission calculations shall be maintained on site for Division inspection upon request.

3.1.2 PM and PM₁₀ emissions from Primary Shale Crushing shall not exceed the long term emission limitations (tons/yr) identified in the tables above (Colorado Construction Permit 00JE0504). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{shale processed (tons/mo)}]}{2000 \text{ lbs/ton}}$$

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

3.2 The tons of shale processed through Primary Shale Crushing shall not exceed the limitations listed in the tables above (Colorado Construction Permit 00JE0504). The weight of shale processed shall be determined using belt scales. Monthly processing rates shall be used in a rolling twelve month total to monitor compliance with the ton per year limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

3.3 Opacity of emissions from Primary Shale Crushing are subject to the following requirements:

- 3.3.1 Visible emissions shall not exceed 15% opacity (40 CFR Part 60 Subpart OOO § 60.672(b), as adopted by reference in Colorado Regulation No. 6, Part A). Compliance with the opacity limitations shall be monitored by conducting visible emission observations daily. Visible emission observations for shall be at least thirty seconds in duration.

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part A).

Note that this opacity requirement is more stringent than the opacity requirements in Conditions 3.3.2 during all times except during startup, shutdown and malfunction.

- 3.3.2 Visible emissions shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1) except during periods of startup, process modifications or adjustment or occasional cleaning of control equipment when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

- 3.3.3 Compliance with the opacity standards shall be monitored by conducting a visible emission observation weekly. If visible emissions are present, an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard.

Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of these opacity limitations shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

All Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.

4. P016 – Product Screening

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)*	Monitoring	
				Method	Interval
PM	4.1	17.31P ^{0.16} lb/hr		Recordkeeping & Calculation	Monthly
		2.1 TPY	0.0630	Recordkeeping & Calculation	
PM ₁₀		1.0 TPY	0.0300	12 month rolling total	
Shale Processing	4.2	300,000 TPY			
Opacity	4.3	Not to Exceed 10%		EPA Method 9	See Condition 4.3
		Not to Exceed 20% Except as Provided for Below			
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			

*The emission factors include a control efficiency of 50% accounting for shale moisture.

4.1 PM and PM₁₀ emissions are subject to the following requirements:

4.1.1 PM emissions from Product Screening shall not exceed the short term emission limitations (lbs/hr), where P = process weight rate in tons/hr identified in the tables above (Colorado Regulation No. 1, Section III.C.1.a & b). Average hourly emissions shall be calculated monthly from the calculated monthly emissions, as required by Condition 4.1.2, divided by the monthly hours of operation. Records of the hours of operation and hourly emission calculations shall be maintained on site for Division inspection upon request.

4.1.2 PM and PM₁₀ emissions from Product Screening shall not exceed the long term emission limitations (tons/yr) identified in the tables above (Colorado Construction Permit 00JE0803). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{shale processed (tons/mo)}]}{2000 \text{ lbs/ton}}$$

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

4.2 The tons of shale processed through Product Screening shall not exceed the limitations listed in the tables above (Colorado Construction Permit 00JE0803). The weight of shale processed shall be determined using belt scales. Monthly processing rates shall be used in a rolling twelve

month total to monitor compliance with the ton per year limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

4.3 Opacity of emissions from Product Screening are subject to the following requirements:

4.3.1 Visible emissions shall not exceed 10% opacity (Colorado Construction Permit 00JE0803 and 40 CFR Part 60 Subpart OOO § 60.672(b) as adopted by reference in Colorado Regulation No. 6, Part A). Compliance with the opacity limitations shall be monitored by conducting visible emission observations daily. Visible emission observations for shall be at least thirty seconds in duration.

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part A).

Note that this opacity requirement is more stringent than the opacity requirements in Conditions 4.3.2 during all times except during startup, shutdown and malfunction.

4.3.2 Visible emissions shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1) except during periods of startup, process modifications or adjustment or occasional cleaning of control equipment when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

4.3.3 Compliance with the opacity standards shall be monitored by conducting a visible emission observation weekly. If visible emissions are present, an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard.

Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of these opacity limitations shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

All Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.

5. P002 – Product Cooler with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	5.1	17.31P ^{0.16} lb/hr		Recordkeeping & Calculation	Monthly
		26.03 TPY	0.137	Recordkeeping & Calculation	
PM ₁₀		14.06 TPY	0.074	Recordkeeping & Calculation	
Shale Processing	5.2	380,000 TPY		12 month rolling total	
Opacity	5.3	Not to Exceed 20% Except as Provided for Below		EPA Method 9	See Condition 5.3
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
Hours of Operation	5.4			Recordkeeping	
CAM	5.5			See Condition 5.5	

P014 – Extruder with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	5.1	17.31P ^{0.16} lb/hr		Recordkeeping & Calculation	Monthly
		0.25 TPY	0.0017	Recordkeeping & Calculation	
PM ₁₀		0.25 TPY	0.0017	12 month rolling total	
Shale Processing	5.2	300,000 TPY			
Opacity	5.3	Not to Exceed 20% Except as Provided for Below		EPA Method 9	See Condition 5.3
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			
Hours of Operation	5.4			Recordkeeping	

5.1 PM and PM₁₀ emissions are subject to the following requirements:

5.1.1 PM emissions from the Product Cooler and Extruder shall not exceed the short term emission limitations (lbs/hr), where P = process weight rate in tons/hr identified in the tables above (Colorado Regulation No. 1, Section III.C.1.a & b). In the absence of

credible evidence to the contrary, compliance with the short term emission limitations shall be presumed provided the baghouses are operated and maintained in accordance with the provisions in Condition 12.1 and the emission limits in Condition 5.1.2 are met.

- 5.1.2 PM and PM₁₀ emissions from the Product Cooler and Extruder shall not exceed the long term emission limitations (tons/yr) identified in the tables above (Colorado Construction Permits 88JE372-2 and 00JE0505). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{shale processed (tons/mo)}]}{2000 \text{ lbs/ton}}$$

The appropriate efficiencies for control equipment are included in the listed emissions factors. These emission factors are to be considered valid provided the baghouses are maintained and operated according to the requirements in Condition 12.1.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

- 5.2 The tons of shale processed through the Product Cooler and Extruder shall not exceed the limitations listed in the tables above (Colorado Construction Permits 88JE372-2 and 00JE0505). The weight of shale processed shall be determined using belt scales. Monthly processing rates shall be used in a rolling twelve month total to monitor compliance with the ton per year limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

- 5.3 Opacity of Emissions from the Product Cooler and Extruder are subject to the following requirements:

- 5.3.1 **State-Only Requirement:** Visible emissions of any particulate matter shall not exceed 20% opacity (Colorado Regulation No. 6, Part B, Section III.C.3). This opacity standard applies to **each stack**.

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 5.3.2 during periods of process modifications or adjustment or occasional cleaning of control equipment.

- 5.3.2 Visible emissions shall not exceed 20% opacity (Colorado Construction Permit 88JE372-2 and 00JE0505 and Colorado Regulation No. 1, Section II.A.1) except during startup, process modifications or adjustment or occasional cleaning of control equipment when visible emissions shall not exceed 30% opacity for a period or periods aggregating more

than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

- 5.3.3 Visible Emission observations shall be conducted for the Extruder weekly. Visible emissions for Product Cooler (CAM source) shall be conducted daily as specified in the CAM plan in Appendix G. If any visible emissions are observed, the permittee shall investigate the baghouse performance and make any repairs or adjustments necessary. A daily log shall be kept of the observations and any action taken as a result and such log shall be made available to the Division upon request. An example log is provided in Appendix G. If, after maintenance has been performed, visible emissions persist for longer than one hour, an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard. The EPA Reference Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification.

If the plant is shut down for maintenance for four (4) consecutive daylight hours or more, no visible emission observations are required for non-CAM sources for that day.

Note that the CAM plan (Appendix G) for Product Cooler requires daily visible emission observations. As required by the CAM requirements if any daily observation indicates visible emissions are seen, such observation must be reported as an excursion, as required by the CAM requirements. For CAM sources, if the plant is shut down for maintenance for four (4) consecutive daylight hours or more, no visible emission observations are required, except that if the visible emission observation is not conducted and no pressure differential is recorded for that day, failure to conduct monitoring for that day must be reported as an excursion.

- 5.4 The total hours of operation and hourly production rate shall be recorded for each calendar month. Records shall be made available to the Division upon request.
- 5.5 The Product Cooler is subject to the Compliance Assurance Monitoring (CAM) requirements with respect to the PM emission limitations in Conditions 5.1.1 and 5.1.2 and the PM₁₀ emission limitations in Condition 5.1.2. Compliance with the CAM requirements shall be monitored in accordance with the requirements in Condition 13.

6. P008 – Lime Scrubber Feeder with Baghouse

Parameter	Permit Condition Number	Limitation	Emission Factor (lb/ton)	Monitoring	
				Method	Interval
PM	6.1	0.84 TPY	0.56	Recordkeeping & Calculation 12 month rolling total	Monthly
PM ₁₀		0.46 TPY	0.31		
Lime Consumption	6.2	3,000 TPY			
Opacity	6.3	Not to Exceed 20% Except as Provided for Below		EPA Method 9	See Condition 6.3
		For Certain Operational Activities - Not to Exceed 30% for a Period or Periods Aggregating More than Six (6) Minutes in Any 60 Consecutive Minutes			

- 6.1 PM and PM₁₀ emissions from Lime Scrubber Feeder shall not exceed the annual emission limitations identified in the tables above (Colorado Construction Permit 88JE372-8). Compliance with the annual limitations shall be monitored by using the above emission factors in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{lime consumption (tons/mo)}]}{2000 \text{ lbs/ton}}$$

The appropriate efficiencies for control equipment are included in the listed emissions factors. These emission factors are to be considered valid provided the baghouses are maintained and operated according to the requirements in Condition 12.1.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

- 6.2 The tons of lime consumed by the Lime Scrubber Feeder shall not exceed the limitations listed in the tables above (Colorado Construction Permit 88JE372-8). The weight of shale processed shall be determined using belt scales. Monthly processing rates shall be used in a rolling twelve month total to monitor compliance with the ton per year limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.
- 6.3 Opacity of Emissions from End-Trim Reclaim, Paper Creasing and Scoring, Starch Storage Silo and the Dunnage Cutting Machine are subject to the following requirements:
- 6.3.1 **State-Only Requirement:** Visible emissions of any particulate matter shall not exceed 20% opacity (Colorado Regulation No. 6, Part B, Section III.C.3). This opacity standard applies to **each stack**.

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 6.3.2 during periods of process modifications or adjustment or occasional cleaning of control equipment.

- 6.3.2 Visible emissions shall not exceed 20% opacity (Colorado Construction Permit 88JE372-8 and Colorado Regulation No. 1, Section II.A.1) except during startup, process modifications or adjustment or occasional cleaning of control equipment when visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).
- 6.3.3 Visible Emission observations shall be conducted weekly. Visible emission observations shall be at least thirty seconds in duration. If any visible emissions are observed, the permittee shall investigate the baghouse performance and make any repairs or adjustments necessary. A daily log shall be kept of the observations and any action taken as a result and such log shall be made available to the Division upon request. An example log is provided in Appendix G. If, after maintenance has been performed, visible emissions persist for longer than one hour, an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard. The EPA Reference Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification.

If the plant is shut down for maintenance for four (4) consecutive daylight hours or more, no visible emission observations are required that day.

7. P010 – Mine/Plant Fugitive Emissions

Parameter	Permit Condition Number	Limitation	Emission Factor	Monitoring	
				Method	Interval
PM	7.1	17.16 TPY		Recordkeeping & Calculation	Monthly
PM ₁₀		7.12 TPY			
Shale Consumption	7.2	500,000 TPY		Recordkeeping & Calculation 12 month rolling total	Monthly
Aggregate Production		380,000 TPY			
Scrubber Waste Dumping		25 tons/day 13,000 TPY			
Coal off-loading		2,000 tons/day 30,000 TPY			
Product Storage Pile		380,000 TPY			
Opacity	7.3	Not to Exceed 20%		See Condition 7.3	
		No off property transport		Follow PM control plan	
		No nuisance conditions			

The following activities are covered by this emission point: Truck loading of raw shale, raw shale dump to feeder breaker, shale haul trucks, road grading, wind erosion scrubber waste loading, scrubber waste haul, scrubber waste dumping, scrubber waste site, coal off-loading, product storage pile.

7.1 PM and PM₁₀ emissions from Mine/Plant Fugitive Emissions point shall not exceed the annual emission limitations identified in the tables above (Colorado Construction Permit 88JE372-10). Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

7.2 Consumption, production and throughput shall not exceed the short-term and annual limitations listed in the tables above (Colorado Construction Permit 88JE372-10). The throughput of plant processes shall be determined using belt scales. Monthly throughput rates shall be used in a rolling twelve month total to monitor compliance with the ton per year limitations. Each month a new twelve month total shall be calculated using the previous twelve months of data.

Compliance with the daily limits shall be monitored by maintaining records and calculations of the material handled for each day material is handled. The records and calculations shall be made available for the Division to review upon request.

7.3 The following guidelines regarding visible emissions shall be followed (Colorado Regulation No. 1 Section III.D). Note that these are guidelines and not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115:

7.3.1 Mining Activities – Visible emissions shall not exceed 20% and no off-property transport of visible emissions shall occur.

- 7.3.2 Haul Roads – No off-property transport of visible emissions shall apply to on-site haul roads, the nuisance guidelines shall apply to off-site haul roads.
- 7.3.3 Haul Trucks – There shall be no off-property transport of visible from haul trucks when operating on the facility property. There shall be no off-vehicle transport of visible emissions from the material in the haul trucks when operating off of the facility property.

Control Measures

- 7.3.4 All haul roads except final product transport roads shall be graveled and water shall be applied as necessary to remain viable as a fugitive emission control measure. All final product haul roads within the plant area shall be paved.
- 7.3.5 All conveyors shall be covered.
- 7.3.6 If excess fugitive emissions (>20%) are observed, the coal shall be watered or foam shall be applied for sufficient duration to control fugitive emissions.
- 7.3.7 Vehicle speed on quarry roads shall not exceed an average of 10 mph. A maximum speed limit of 15 mph. shall be posted.
- 7.3.8 The sludge disposal area shall be watered as necessary or revegetated to control fugitive particulate emissions.
- 7.3.9 Water or foam shall be applied to the product before storage.
- 7.3.10 Telescoping chutes shall be used to unload product silos.

Compliance with the opacity limits in Condition 7.3.1 shall be monitored as follows:

- 7.3.11 Within 180 days after the issuance of this permit, a Method 22 shall be conducted to demonstrate compliance with the opacity limitations above. This test shall be performed at the leeward property line of the quarry while mining operations are occurring.
- 7.3.12 After the initial opacity observation, compliance with the opacity standard shall be presumed provided the particulate emissions control plan as required by Condition 7.3 is followed.

8. P017 – Cold Solvent Cleaner

Parameter	Permit Condition Number	Limitation	Emission Factor	Monitoring	
				Method	Interval
Reg 7, Section X.A – Transfer and Storage of Waste & Solvents	8.1 8.2	See Conditions 8.1 and 8.2			
Reg 7, Section X.B – Control Standards	8.3 – 8.8	See Conditions 8.3 through 8.8			

Note that this emission unit is exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B.

- 8.1 In any disposal or transfer of waste or used solvent, at least 80 percent by weight of the solvent/waste liquid shall be retained (i.e., no more than 20 percent of the liquid solvent/solute mixture shall evaporate or otherwise be lost during transfers). (Colorado Regulation No. 7, Section X.A.3)
- 8.2 Waste or used solvent shall be stored in closed containers unless otherwise required by law. (Colorado Regulation No. 7, Section X.A.4)
- 8.3 All cold-cleaners shall have a properly fitting cover. (Colorado Regulation No. 7, Section X.B.1.a(i))
 - 8.3.1 Covers shall be designed to be easily operable with one hand under any of the following conditions (Colorado Regulation No. 7, Section X.B.1.a(ii)):
 - 8.3.1.1 Solvent true vapor pressure is greater than 15 torr (0.3 psia) at 38°C (100°F). (Colorado Regulation No. 7, Section X.B.1.a(ii)(A))
 - 8.3.1.2 The solvent is agitated by an agitating mechanism. (Colorado Regulation No. 7, Section X.B.1.a(ii)(B))
 - 8.3.1.3 The solvent is heated. (Colorado Regulation No. 7, Section X.B.1.a(ii)(C))
- 8.4 All cold-cleaners shall have a drainage facility that captures the drained liquid solvent from the cleaned parts. (Colorado Regulation No. 7, Section X.B.1.b(i))

For cold-cleaners using solvent which has a vapor pressure greater than 32 torr (0.62 psia) measured at 38°C (100°F) either:

 - 8.4.1 There shall be an internal drainage facility within the confines of the cold-cleaner, so that parts are enclosed under the (closed) cover to drain after cleaning, or if such a facility will not fit within; (Colorado Regulation No. 7, Section X.B.1.b(ii)(A))
 - 8.4.2 An enclosed, external drainage facility that captures the drained solvent liquid from the cleaned parts. (Colorado Regulation No. 7, Section X.B.1.b(ii)(B))

- 8.5 A permanent, clearly visible sign shall be mounted on or next to the cold-cleaner. The sign shall list the operating requirements. (Colorado Regulation No. 7, Section X.B.1.c)
- 8.6 Solvent spray apparatus shall not have a splashing, fine atomizing, or shower type action but rather should produce a solid, cohesive stream. Solvent spray shall be used at a pressure that does not cause excessive splashing. (Colorado Regulation No. 7, Section X.B.1.d)

For solvents with a true vapor pressure above 32 torr (0.62 psia) at 38°C (100°F), or, for solvents heated above 50°C (120°F), one of the following techniques shall be used:

- 8.6.1 A freeboard ratio greater than or equal to 0.7. (Colorado Regulation No. 7, Section X.B.1.d(i))
- 8.6.2 A water or a non-volatile liquid cover. The cover liquid shall not be soluble in the solvent and shall not be more dense than the solvent and the depth of the cover liquid shall be sufficient to prevent the escape of solvent vapors. (Colorado Regulation No. 7, Section X.B.1.d(ii))
- 8.7 The cold-cleaner cover shall be closed whenever parts are not being handled within the cleaner confines. (Colorado Regulation No. 7, Section X.B.2.a)
- 8.8 Cleaned parts shall be drained for at least 15 seconds and/or until dripping ceases. Any pools of solvent shall be tipped out off the clean part back into the tank. (Colorado Regulation No. 7, Section X.B.2.b)

9. E013 – Emergency Diesel Generator, 485 HP

Parameter	Permit Condition Number	Limitation	Emission Factor	Monitoring	
				Method	Interval
NO _x	9.1			Recordkeeping & Calculation	Annually
NESHAP Subpart ZZZZ	9.2	Change Oil and Filter Inspect Air Cleaner Inspect Hoses and Belts		See Condition 9.2	
Opacity	9.3	Not to Exceed 20% Except as Provided for Below		EPA Method 9	See Condition 9.3
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NESHAP Subpart A – General Provisions	9.4			See Condition 9.4	
Hours of Operation	9.5			Recordkeeping	Annually

Note that this emission unit is exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B.

9.1 This emergency generator should be counted as insignificant activity as required in Condition 11.1. The following equation shall be used in calculating the NO_x emissions from this engine. As specified in Condition 11.2, emissions from the engine and all other NO_x emitting insignificant activity must be calculated annually to monitor the facility's status in regards to the 250 tons/yr PSD threshold.

9.2 **[Federal - Only]** This engine is subject to the requirements in 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", as follows:

These requirements included in this Condition 9.2 are only federally enforceable. As of the date of revised permit issuance [DATE], the requirements in 40 CFR Part 63 Subpart ZZZZ, last updated on March 9, 2011, have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements these engines will be subject to the APEN reporting and minor source permitting requirements and these requirements will be state-enforceable.

9.2.1 The facility must comply with the applicable requirements no later than May 3, 2013. (§ 63.6595(a)(1))

Operating and Maintenance Requirements

9.2.2 Operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance

and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (§ 63.6625(e))

9.2.3 The following operating and maintenance requirements apply to this emergency stationary compression ignition RICE located at an area source for HAPs: (40 CFR Part 63 Subpart ZZZZ Table 2d)

9.2.3.1 Change oil and filter every 500 hours of operation or annually, whichever comes first (Table 2d, item 4.a)

9.2.3.2 Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first (Table 2d, item 4.b)

9.2.3.3 Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary (Table 2d, item 4.c)

9.2.3.4 During periods of startup minimize the engine's time spent idle and minimize the engine's startup time at startup to a period need for appropriate and safe loading of the engine, not to exceed 30 minutes. (Table 2d & §63.6625(h)).

Notwithstanding the above requirements, the following applies:

9.2.3.5 Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Condition 9.2.3.1. (Table 2d, footnote 1)

- a. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 9.2.3.1. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. (§ 63.6625(i))

9.2.3.6 If this engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable

after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. (Table 2d, footnote 2)

- 9.2.4 Compliance with the emission limitations and operating limitations in this subpart must be achieved at all times. (§63.6605(a))

Hours of Operation

- 9.2.5 This engine must be equipped with a non-resettable hour meter if one is not already installed. (§ 63.6625(f))

- 9.2.6 Operation of the engine shall be in accordance with the following: (§ 63.6640(f))

9.2.6.1 Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. (§ 63.6640(f)(1))

9.2.6.2 There is no time limit on the use of emergency stationary RICE in emergency situations. (§ 63.6640(f)(2))

9.2.6.3 This engine may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. (§ 63.6640(f)(3))

9.2.6.4 The engine may be operated up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of

demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this Condition 9.2.6.4, as long as the power provided by the financial arrangement is limited to emergency power. (§ 63.6640(f)(4))

Records

- 9.2.7 Records shall be kept of the hours of operation of the engine that is recorded through the non-resettable hour meter as required by Condition 9.2.5. Hours spent for emergency operations, including what classified the operation as emergency and hours spent for non-emergency operations must be documented. If the engines are used for demand response operation, records must be kept of the notification of the emergency situation, and the time the engine was operated as part of demand response. (§ 63.6655(f))
- 9.2.8 Records shall be kept of the maintenance conducted on the stationary RICE in order to demonstrate that the operation and maintenance of the stationary RICE and after-treatment control device was in accordance with the maintenance plan (§ 63.6655(e) and § 63.6655(e)(3))
- 9.3 Visible emissions shall not exceed 20% opacity (Colorado Regulation No. 1, Section II.A.1) except during periods of startup for which visible emissions shall not exceed 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with the opacity limitations in this Condition 9.3 shall be monitored by conducting opacity observations in accordance with EPA Reference Method 9 as follows:

- 9.3.1 An engine startup period of less than 60 minutes shall not require a startup opacity observation. If the engine startup period is greater than 60 minutes, one opacity observation shall be made for each consecutive 4 hour period of startup during daylight hours. In addition, a record shall be kept of the date and time the engine started and when it was shutdown.
- 9.3.2 Continued operation of the engine after the completion of the startup period shall require monthly opacity observations. If the startup and operation of the engine lasts less than a total of 4 hours from engine start to engine stop, in any one day no opacity observations are required for that day.
- 9.3.3 If no opacity observations are made pursuant to Conditions 9.3.1 and 9.3.2 above, then an opacity observation shall be conducted annually.
- 9.3.4 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

- 9.4 This engine is subject to the requirements in 40 CFR part 63 Subpart A “General Provisions”, as adopted by reference in Colorado Regulation No. 8, Part E, Section I as specified in 40 CFR Part 63 Subpart ZZZZ § 63.6665. These requirements include, but are not limited to the following:

9.4.1 Prohibited activities in § 63.4(a).

9.4.2 Circumvention in § 63.4(b)

- 9.5 Hours of Operation for each engine shall be monitored annually and recorded in a log to be made available to the Division upon request. Recorded data shall be used to calculate emissions as specified in Condition 9.1. The hour meter as required by federal-only Condition 9.2.5 may be used to satisfy this requirement.

10. T027 – Gasoline Storage Tank

Parameter	Permit Condition Number	Limitation	Emission Factor	Monitoring	
				Method	Interval
Gasoline Throughput	10.1			Recordkeeping	Monthly
NESHAP Subpart CCCCCC	10.2	Work Practice Standard		See Condition 10.2	

Note that this emission unit is exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B.

- 10.1 The quantity of gasoline processed through this tank shall be monitored and recorded monthly. Monthly records of gasoline processed shall be retained as required by Condition 10.2.1.
- 10.2 **[Federal-Only]** This tank is subject to the requirements in 40 CFR Part 63 Subpart CCCCCC, “National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities”, as follows:

These requirements included in this Condition 10.2 are only federally enforceable. As of the date of revised permit issuance [DATE], the requirements in 40 CFR Part 63 Subpart CCCCCC have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements this tank will be subject to the APEN reporting and minor source permitting requirements and these requirements will be state-enforceable.

10.2.1 An affected source shall, upon request by the Division, demonstrate that the tank’s average monthly throughput is less than the 10,000-gallon threshold level (§ 63.11111(e)).

10.2.2 The facility must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following (§ 63.11116(a)):

10.2.2.1 Minimize gasoline spills;

10.2.2.2 Clean up spills as expeditiously as practicable;

10.2.2.3 Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

10.2.2.4 Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators;

10.2.3 The facility is not required to submit notifications or reports, but must have records available within 24 hours of a request by the Division to document the gasoline throughput (§ 63.11116(b)).

11. Insignificant Activities

Parameter	Permit Condition Number	Limitation	Emission Factor	Monitoring	
				Method	Interval
NO _x	11.1			Recordkeeping & Calculation	Annually

Note that insignificant activity is exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B.

11.1 All insignificant activities that are sources of NO_x emissions shall be identified. The potential to emit for NO_x emissions from the insignificant activities shall be calculated each calendar year. If the total potential to emit for the insignificant sources exceeds 2.0 tons per year, the total plant potential to emit will exceed the 250 tons per year limit for synthetic minor status for the Prevention of Significant Deterioration (PSD) provisions. The emission factors and/or methodology used to estimate the emissions shall be documented and made available to the Division upon request.

12. Particulate Matter Emission Periodic Monitoring Requirements

12.1 Baghouse Maintenance Requirements

12.1.1 The pressure differential shall be read and recorded daily. Any maintenance taken as a result of such reading shall be recorded in a log such as the example log provided in Appendix G. The log shall be made available to the Division upon request.

Note: If the process is not in operation at the time the daily baghouse inspections are conducted, the pressure drop need not be recorded for non-CAM sources for that day.

12.1.2 Routine maintenance of baghouses shall be conducted in accordance with manufacturer's specifications. These specifications shall be in written format. Any maintenance (routine or otherwise) shall be recorded in a log. The log shall be made available to the Division upon request.

- 12.1.3 The baghouses shall be internally inspected for bag integrity and overall mechanical efficiency semi-annually. Powdered dye tests shall be performed as necessary to identify faulty bags. Necessary repairs shall be made prior to bringing the equipment back on line. An adequate inventory of replacement bags and parts shall be maintained on site.

13. Compliance Assurance Monitoring

- 13.1 The Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, apply to the Rotary Kiln (P001), Product Cooler (P002), Secondary Crushing (P003), Raw Shale Storage Silos (P004), Product Silos (P006), Product Crushing/Screening (P007), New Kiln Dust Silo (P012), Primary Crushing (P013) and the Kiln Dust Silo (P018) as indicated in Conditions 1.10, 2.4 and 5.5 as follows:

- 13.1.1 The permittee shall follow the CAM Plan provided in Appendix G of this permit. Excursions, for purposes of reporting are any visible opacity emissions from the emission unit stacks, any instance when a daily baghouse pressure reading is either outside the established acceptable differential pressure range or any day in which no monitoring was conducted (i.e. no visible emission observation conducted and no pressure differential recorded) for an emission unit. For all Wheelabrator and Slys model baghouses the acceptable pressure differential range is between 1 and 6" of water. For Mikropul model baghouse the acceptable range is between 2 and 4" of water. Excursions shall be reported as required by Section IV, Conditions 21 and 22.d of this permit.

13.1.2 Operation of Approved Monitoring

- 13.1.2.1 At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment (40 CFR Part 64 § 64.7(b), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.2.2 Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of these CAM requirements, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions (40

CFR Part 64 § 64.7(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

13.1.2.3 Response to excursions or exceedances

- a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable (40 CFR Part 64 § 64.7(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- b. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process (40 CFR Part 64 § 64.7(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

- 13.1.2.4 After approval of the monitoring required under the CAM requirements, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Division and, if necessary submit a proposed modification for this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters (40 CFR Part 64 § 64.7(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

13.1.3 Quality Improvement Plan (QIP) Requirements

- 13.1.3.1 Based on the results of a determination made under the provisions of Condition 13.1.2.3.b, the Division may require the owner or operator to develop and implement a QIP (40 CFR Part 64 § 64.8(a), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.3.2 The owner or operator shall maintain a written QIP, if required, and have it available for inspection (40 CFR Part 64 § 64.8(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.3.3 The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:
 - a. Improved preventative maintenance practices (40 CFR Part 64 § 64.8(b)(2)(i), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
 - b. Process operation changes (40 CFR Part 64 § 64.8(b)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
 - c. Appropriate improvements to control methods (40 CFR Part 64 § 64.8(b)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
 - d. Other steps appropriate to correct control performance (40 CFR Part 64 § 64.8(b)(2)(iv), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
 - e. More frequent or improved monitoring (only in conjunction with one or more steps under Conditions 13.1.3.3.a through d above) (40 CFR Part 64 § 64.8(b)(2)(v), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.3.4 If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined (40 CFR Part 64 § 64.8(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.3.5 Following implementation of a QIP, upon any subsequent determination pursuant to Condition 13.1.2.3.b, the Division or the U.S. EPA may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:
 - a. Failed to address the cause of the control device performance problems (40 CFR Part 64 § 64.8(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); or

- b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions (40 CFR Part 64 § 64.8(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

- 13.1.3.6 Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act (40 CFR Part 64 § 64.8(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

13.1.4 Reporting and Recordkeeping Requirements

- 13.1.4.1 Reporting Requirements: The reports required by Section IV, Condition 22.d, shall contain the information specified in Appendix B of the permit and the following information, as applicable:

- a. Summary information on the number, duration and cause (including unknown cause, if applicable), for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable) ((40 CFR Part 64 § 64.9(a)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); and
- b. The owner or operator shall submit, if necessary, a description of the actions taken to implement a QIP during the reporting period as specified in Condition 13.1.3 of this permit. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring (40 CFR Part 64 § 64.9(a)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

- 13.1.4.2 General Recordkeeping Requirements: In addition to the recordkeeping requirements in Section IV, Condition 22.a through c.

- a. The owner or operator shall maintain records of any written QIP required pursuant to Condition 13.1.3 and any activities undertaken to implement a QIP, and any supporting information required to be maintained under these CAM requirements (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions) (40 CFR Part 64 § 64.9(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape

disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements (40 CFR Part 64 § 64.9(b)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

13.1.5 Savings Provisions

- 13.1.5.1 Nothing in these CAM requirements shall excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act. These CAM requirements shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purposes of determining the monitoring to be imposed under separate authority under the federal clean air act, including monitoring in permits issued pursuant to title I of the federal clean air act. The purpose of the CAM requirements is to require, as part of the issuance of this Title V operating permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of CAM (40 CFR Part 64 § 64.10(a)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.5.2 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to impose additional or more stringent monitoring, recordkeeping, testing or reporting requirements on any owner or operator of a source under any provision of the federal clean air act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).
- 13.1.5.3 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to take any enforcement action under the federal clean air act for any violation of an applicable requirement or of any person to take action under section 304 of the federal clean air act (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

SECTION III - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D. & XIII.B; § 25-7-114.4(3)(a), C.R.S.

1. Specific Non-Applicable Requirements

Based on the information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modifications or reconstruction on which construction commenced prior to permit issuance.

None identified.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

- 2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;
- 2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- 2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;
- 2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to §25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;
- 2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.
- 2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Stream-lined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

Permit Condition	Streamlined (Subsumed) Requirements
Section II, Conditions 1.6, 2.3, 3.3 and 4.3.	Colorado Regulation No. 6, Part B, Section III.C.3 [opacity of emissions shall not exceed 20%] – State Only Requirement
Section II, Conditions 1.2.2, 2.1.2, 3.1.1, 4.1.1, and 5.1.1.	Colorado Regulation No. 6, Part B, Section III.C.2 [process weight rate particulate matter emission limits] - State Only Requirement
Section II, Condition 2.1.2	Colorado Regulation No. 6, Part B, Section III.C.1 [process weight rate particulate matter emission limits] - State Only Requirement

SECTION IV - General Permit Conditions (ver 11/16/2010)

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

- a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.
- c. Compliance certifications shall contain:
 - (i) the identification of each permit term and condition that is the basis of the certification;
 - (ii) the compliance status of the source;
 - (iii) whether compliance was continuous or intermittent;
 - (iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and
 - (v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.
- d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.
- e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II.E., II.F., II.I, and II.J

- a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

- (i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;
- (ii) approves the use of an equivalent method;
- (iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or
- (iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

- (i) Sampling ports adequate for test methods applicable to such facility;
- (ii) Safe sampling platform(s);
- (iii) Safe access to sampling platform(s); and
- (iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

Note that until such time as the U.S. EPA approves this provision into the Colorado State Implementation Plan (SIP), it shall be enforceable only by the State.

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

- (i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;
- (ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;
- (iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;
- (iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;
- (v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;
- (vi) All emissions monitoring systems were kept in operation (if at all possible);
- (vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;
- (viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- (ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and
- (x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

- (i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;
- (ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;
- (iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;
- (v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;
- (vi) All emissions monitoring systems were kept in operation (if at all possible);
- (vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,
- (viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

- a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.
- b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.
- d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.
- e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.
- f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:
 - (i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and
 - (ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

- g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.E

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. the permitted facility was at the time being properly operated;
- c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

6. Emission Controls for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, "asbestos control."

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S §§ 25-7-114.1(6) and 25-7-114.7

- a. The permittee shall pay an annual emissions fee in accordance with the provisions of C.R.S. § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.
- b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S. § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

- c. The permittee shall pay an APEN fee in accordance with the provisions of C.R.S. § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

- a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;
- b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;
- d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.- II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

- a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.
- b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

- a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or
- b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:
 - (i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;
 - (ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and
 - (iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.
- c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

- a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:
 - (i) date, place as defined in the Operating Permit, and time of sampling or measurements;
 - (ii) date(s) on which analyses were performed;
 - (iii) the company or entity that performed the analysis;
 - (iv) the analytical techniques or methods used;
 - (v) the results of such analysis; and
 - (vi) the operating conditions at the time of sampling or measurement.
- b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.
- c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

- d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.
- e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

- a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.
- b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.
- c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.
- d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

- a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.
- b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

- a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

- b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be

transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

- c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.
- d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.
- e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

OPERATING PERMIT APPENDICES

- A - INSPECTION INFORMATION
- B - MONITORING AND PERMIT DEVIATION REPORT
- C - COMPLIANCE CERTIFICATION REPORT
- D - NOTIFICATION ADDRESSES
- E - PERMIT ACRONYMS
- F - PERMIT MODIFICATIONS
- G - COMPLIANCE ASSURANCE MONITORING PLAN
- H - EXAMPLE DAILY INSPECTION LOG

***DISCLAIMER:**

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise provided in the permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A - Inspection Information

1. Directions to Plant:

The plant is located immediately south of the Jefferson-Boulder County line, approximately 1.5 miles south of the Highway 93(S. Foothills Hwy) and Highway 128 (W. 120th Ave) junction. The quarry is on the west side of Highway 93 and the processing plant is on the east side of the highway.

2. Safety Equipment Required:

Hard Hat

3. Facility Plot Plan:

The attached Figure (following page) shows the plot plan as submitted to the Division on May 23, 2011.

4. List of Insignificant Activities:

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

Loading of coal day bin

Product truck loading

Product train loading

Scrubber waste loading

Coal train off-loading

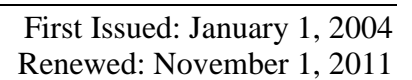
Coal handling

Coal stacking

Space heating boilers and furnaces:

B014	Office Boiler	217,600 Btu/hr
B015	RTU heater	90,000 Btu/hr
B016	RTU heater	175,000 Btu/hr
B017	Unit heater	150,000 Btu/hr
B018	Unit heater	150,000 Btu/hr
B019	Unit heater	150,000 Btu/hr
B020	Unit heater	150,000 Btu/hr
B021	Unit heater	150,000 Btu/hr
B022	Unit heater	150,000 Btu/hr
B023	Unit heater	150,000 Btu/hr
B024	Unit heater	150,000 Btu/hr
B025	Unit heater	150,000 Btu/hr

One 5,200 gallon diesel fuel storage tank (T026)
Three propane storage tanks - 500 gallons (T028), 1000 gallons, (T029), 1000 gallons (T030)
Two 6,000 gallon Coherex storage tanks (T031) (T032)
Landscaping and site housekeeping devices less than 10 hp in size.
Air conditions and ventilation fans.
Chemical storage areas (less than 5,000 gallons total)
Two storage tanks for calcium chloride of 21,000 gallon capacity each



APPENDIX B

Reporting Requirements and Definitions

with codes ver 2/20/07

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

- (A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);
- (B) fails to notify or report as required under the Act; or
- (C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.

All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported “promptly”)

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of

such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, “malfunction” shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

- (1) A situation where emissions exceed an emission limitation or standard contained in the permit;
- (2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;
- (3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,
- (4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

- | | |
|-------------------------|--|
| 1 = Standard: | When the requirement is an emission limit or standard |
| 2 = Process: | When the requirement is a production/process limit |
| 3 = Monitor: | When the requirement is monitoring |
| 4 = Test: | When the requirement is testing |
| 5 = Maintenance: | When required maintenance is not performed |
| 6 = Record: | When the requirement is recordkeeping |
| 7 = Report: | When the requirement is reporting |
| 8 = CAM: | A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. |
| 9 = Other: | When the deviation is not covered by any of the above categories |

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the

permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;
- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;
- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.¹
- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

¹ For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergency Provisions

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Monitoring and Permit Deviation Report - Part I

- Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.
- Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: TXI Operations, LP – Boulder Plant

OPERATING PERMIT NO: 95OPJE084

REPORTING PERIOD: _____ (see first page of the permit for specific reporting period and dates)

Unit ID	Unit Description	Deviations noted During Period? ¹		Deviation Code ²	Malfunction/Emergency Condition Reported During Period?	
		YES	NO		YES	NO
P001	Rotary kiln					
P002	Product cooler					
P003	Secondary shale crushing					
P004	Raw shale storage silos					
P006	Product silos					
P007	Product crushing & screening					
P008	Lime scrubber feeder					
P010	Mine/Plant fugitive emissions					
P012	New kiln dust silo					
P013	Primary shale crushing					
P014	Extruder					
P016	Product screening					
P017	Cold solvent cleaner					
P018	Kiln dust silo					
	Emergency generator					
	Gasoline storage tank					
	General Conditions					
	Insignificant Activities					

¹ See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

² Use the following entries, as appropriate

- | | |
|-------------------------|--|
| 1 = Standard: | When the requirement is an emission limit or standard |
| 2 = Process: | When the requirement is a production/process limit |
| 3 = Monitor: | When the requirement is monitoring |
| 4 = Test: | When the requirement is testing |
| 5 = Maintenance: | When required maintenance is not performed |
| 6 = Record: | When the requirement is recordkeeping |
| 7 = Report: | When the requirement is reporting |
| 8 = CAM: | A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. |
| 9 = Other: | When the deviation is not covered by any of the above categories |

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: TXI Operations, LP – Boulder Plant
OPERATING PERMIT NO: 95OPJE084
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction _____ N/A _____

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction _____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code _____

Division Code QA: _____

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/04 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction XX N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to J. Garcia, APCD

Deviation Code _____

Division Code QA: _____

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: TXI Operations, LP – Boulder Plant

FACILITY IDENTIFICATION NUMBER: 059/409

PERMIT NUMBER: 95OPJE084

REPORTING PERIOD: _____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

Printed or Typed Name

Title

Signature of Responsible Official

Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C

Required Format for Annual Compliance Certification Reports

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: TXI Operations, LP – Boulder Plant

OPERATING PERMIT NO: 95OPJE084

REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Unit ID	Unit Description	Deviations Reported ¹		Monitoring Method per Permit? ²		Was compliance continuous or intermittent? ³	
		Previous	Current	YES	NO	Continuous	Intermittent
P001	Rotary kiln						
P002	Product cooler						
P003	Secondary shale crushing						
P004	Raw shale storage silos						
P006	Product silos						
P007	Product crushing & screening						
P008	Lime scrubber feeder						
P010	Mine/Plant fugitive emissions						
P012	New kiln dust silo						
P013	Primary shale crushing						
P014	Extruder						
P016	Product screening						
P017	Cold solvent cleaner						
P018	Kiln dust silo						

Unit ID	Unit Description	Deviations Reported ¹		Monitoring Method per Permit? ²		Was compliance continuous or intermittent? ³	
		Previous	Current	YES	NO	Continuous	Intermittent
	Emergency generator						
	Gasoline storage tank						
	General Conditions						
	Insignificant Activities						

¹ If deviations were noted in a previous deviation report, put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

² Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

³ Note whether the compliance status with each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

⁴ Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

- A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)
- B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).
 1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Annual Compliance Certification must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

Printed or Typed Name	Title
Signature	Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D

Notification Addresses

1. Air Pollution Control Division

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Matt Burgett

2. United States Environmental Protection Agency

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, Colorado 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, Colorado 80202-1129

APPENDIX E

Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BACT -	Best Available Control Technology
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEM -	Continuous Emissions Monitor
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CRS -	Colorado Revised Statute
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate in MMBtu/hr
FR -	Federal Register
G -	Grams
Gal -	Gallon
GPM -	Gallons per Minute
HAPs -	Hazardous Air Pollutants
HP -	Horsepower
HP-HR -	Horsepower Hour (G/HP-HR = Grams per Horsepower Hour)
LAER -	Lowest Achievable Emission Rate
LBS -	Pounds
M -	Thousand
MM -	Million
MMscf -	Million Standard Cubic Feet
MMscfd -	Million Standard Cubic Feet per Day
N/A or NA -	Not Applicable
NO _x -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter
PM ₁₀ -	Particulate Matter Under 10 Microns

PSD -	Prevention of Significant Deterioration
PTE -	Potential To Emit
RACT -	Reasonably Available Control Technology
SCC -	Source Classification Code
SCF -	Standard Cubic Feet
SIC -	Standard Industrial Classification
SO ₂ -	Sulfur Dioxide
TPY -	Tons Per Year
TSP -	Total Suspended Particulate
VOC -	Volatile Organic Compounds

APPENDIX F
Permit Modifications

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION

APPENDIX G Compliance Assurance Monitoring Plan

I. Background

a. Emission Units Description:

The Rotary Kiln (P001), Product Cooler (P002), Secondary Shale Crushing (P003), Raw Shale Storage Silos (P004), Product Silos (P006), Product Crushing/Screening (P007), New Kiln Dust Silo (P012), and Kiln Dust Silo (P018) are all manufacturing processes in the production of lightweight aggregate from shale. All points are sources of particulate matter emissions and are equipped with baghouses.

Note that since all pollutant specific emission units have similar control devices and limitations, the following CAM plan applies to all emission units.

b. Applicable Regulation, Emission Limit, Monitoring Requirements:

1. Rotary Kiln (P001)

Regulation:	Regulation No. 1, Section III.C.1.b
Emission Limitations:	PM (lbs/hr) not to exceed $17.31(P)^{0.16}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 1.2.3 (underlying Colorado Construction Permit 88JE372-1)
Emission Limitations:	PM = 25.0 tons/yr PM ₁₀ = 25.0 tons/yr
Regulation:	40 CFR Part 60 Subpart UUU § 60.732(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.092 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

2. Product Cooler (P002)

Regulation:	Regulation No. 1, Section III.C.1.b
Emission Limitations:	PM (lbs/hr) not to exceed $17.31(P)^{0.16}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 5.1.2 (underlying Colorado Construction Permit 88JE372-2)
Emission Limitations:	PM = 26.03 tons/yr PM ₁₀ = 14.06 tons/yr
Monitoring Requirements:	Pressure Differential and Visible Emissions

3. Secondary Shale Crushing (P003)

Regulation:	Regulation No. 1, Section III.C.1.b
Emission Limitations:	PM (lbs/hr) not to exceed $17.31(P)^{0.16}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 2.1.3 (underlying Colorado Construction Permit 88JE372-3)
Emission Limitations:	PM = 4.54 tons/yr PM ₁₀ = 2.20 tons/yr
Regulation:	40 CFR Part 60 Subpart OOO § 60.672(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.05 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

4. Raw Shale Storage Silos (P004)

Regulation:	Regulation No. 1, Section III.C.1.b
Emission Limitations:	PM (lbs/hr) not to exceed $17.31(P)^{0.16}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 2.1.3 (underlying Colorado Construction Permit 88JE372-4)
Emission Limitations:	PM = 3.57 tons/yr PM ₁₀ = 1.98 tons/yr
Regulation:	40 CFR Part 60 Subpart OOO § 60.672(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.05 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

5. Product Silos (P006)

Regulation:	Regulation No. 1, Section III.C.1.b
Emission Limitations:	PM (lbs/hr) not to exceed $17.31(P)^{0.16}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 2.1.3 (underlying Colorado Construction Permit 88JE372-6)
Emission Limitations:	PM = 2.54 tons/yr PM ₁₀ = 1.32 tons/yr
Regulation:	40 CFR Part 60 Subpart OOO § 60.672(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.05 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

6. Product Crushing/Screening (P007)

Regulation:	Regulation No. 1, Section III.C.1.b
Emission Limitations:	PM (lbs/hr) not to exceed $17.31(P)^{0.16}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 2.1.3 (underlying Colorado Construction Permit 88JE372-7)
Emission Limitations:	PM = 11.38 tons/yr PM ₁₀ = 6.14 tons/yr
Regulation:	40 CFR Part 60 Subpart OOO § 60.672(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.05 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

7. New Kiln Dust Silo (P012)

Regulation:	Regulation No. 1, Section III.C.1.a
Emission Limitations:	PM (lbs/hr) not to exceed $3.59(P)^{0.62}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 2.1.3 (underlying Colorado Construction Permit 99JE0730)
Emission Limitations:	PM = 3.25 tons/yr PM ₁₀ = 3.25 tons/yr
Regulation:	40 CFR Part 60 Subpart OOO § 60.672(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.05 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

8. Kiln Dust Silo (P018)

Regulation:	Regulation No. 1, Section III.C.1.a
Emission Limitations:	PM (lbs/hr) not to exceed $3.59(P)^{0.62}$ Where P = process weight rate in tons/hr
Regulation:	Operating Permit Condition 2.1.3
Emission Limitations:	PM = 4.51 tons/yr PM ₁₀ = 4.51 tons/yr
Regulation:	40 CFR Part 60 Subpart OOO § 60.672(a), as adopted by reference in Colorado Regulation No. 6, Part A
Emission Limitations:	PM = 0.05 g/dscm (grams per dry standard cubic meter)
Monitoring Requirements:	Pressure Differential and Visible Emissions

c. Control Technology:

Rotary Kiln:	Baghouse, Mikro PU Model 1400S-12-TRH-C
Product Cooler:	Bagfilter, Mikro PU Model 1400J-12-TRH-C
Secondary Crusher:	Bagfilter, WW Sly, PC No. 207-6
Raw Shale Storage:	Bagfilter, WW Sly, PC No. 208-6
Product Silos:	Dust Collector, Wheelabrator DC-9 Model 36 Size 510
Product Crushing/Screening:	Dust Collector, Wheelabrator DC-7 Model 36 Size 45WCC Baghouse, WW Sly PC No. 221-6 Dust Collector, Wheelabrator DC-8 Model 36 Size 45WCC
New Kiln Dust Silo:	Fabric Filter, Wheelabrator Model 43WCC Mod 36 Pulse
Kiln Dust Silo:	Fabric Filter, Wheelabrator Model 36 Size 45

II. Monitoring Approach

	Indicator 1	Indicator 2
I. Indicator Measurement Approach	Visible Emissions Visible emissions from the baghouses will be monitored daily by conducting a visible emission observation.	Pressure Differential The differential pressure for each baghouse shall be recorded weekly.
II. Indicator Range	An excursion is identified as any visible emissions. Excursions trigger the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.	An excursion is identified as any time during which the differential pressure is outside the established acceptable range. The ranges for each type of baghouse are as follows: Wheelabrator & Sly: 1" to 6" Mikropul: 2" to 4" Excursions trigger the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.
III. Performance Criteria		
a. Data Representativeness	Measurements are being made at the emissions point (baghouse).	Measurements via pressure taps are made at the inlet and outlet of the baghouse using magnahelic differential pressure gauges.
b. QA/QC Practices and Criteria	Certification is not required for non-Method 9 visible observations but personnel shall be trained in general procedures for the determination of visible emissions. Persons performing the visible emission observations shall be trained in determining the presence of visible emissions. A list of observers trained to	The magnahelic gauges will be inspected semi-annually. Repairs will be made as necessary in accordance with good maintenance practices and manufacturer's recommendations.

	Indicator 1	Indicator 2
	perform the visible emission observations shall be maintained.	
c. Monitoring Frequency	<p>Six (6) minute visible emission observations using Method 22 are conducted daily. Results of the daily readings shall be recorded in a log book.</p> <p>Note: If the plant is shut down for maintenance for four (4) consecutive daylight hours or more, no visible emission observations are required for that day, provided a pressure differential reading is recorded for that day.</p>	The pressure drop across the inlet and outlet of the baghouse shall be recorded weekly. Results of the weekly reading will be recorded in a log book.
	Failure to either conduct a visible emission observation or record a pressure drop on any day for any emission unit shall be reported as an excursion.	

III. Justification

a. Background:

This facility processes shale into lightweight aggregate. The specific emission units and control devices are as follows:

Emission Unit	Description	Control Device
Rotary Kiln (P001)	Coal-fired kiln for shale calcination	Baghouse - Mikro PU Model 1400S Scrubber - Dulow Model A-5 (no CAM)
Product Cooler (P002)	Cools lightweight aggregate after calcination	Baghouse - Mikro Pul Model 1400J
Secondary Crushing (P003)	Raw shale secondary crusher and screens	Baghouse - W.W. Sly, PC No. 207-6
Raw Shale Storage Silos (P004)	Raw shale storage bins, conveyor discharge, silo transfers and screening	Baghouse-WW Sly, PC No. 208-6
Product Silos (P006)	Consists of lightweight aggregate storage bins, load-in and screens	Wheelabrator DC-9 Model #36 Size 150
Product Crushing & Screening (P007)	Point consists of a vertical shaft impactor, roll crushers, screens, conveyor belt drop point and a product elevator.	Wheelabrator DC-7 Model #36 WCC Size 45 Baghouse - WW Sly, PC No. 221-6 Wheelabrator DC-8 Model #36 WCC Size 45
New Kiln Dust Silo (P012)	Storage bin and associated handling.	Wheelabrator fabric filter, Model 43WCC Mod 36 Pulse
Kiln Dust Silo (P018)	Storage bin and associated handling.	Wheelabrator fabric filter, Model 36, Size 45, 5500 ACFM

b. Rational for Selection of Performance Indicators:

Visible emissions were selected as an indicator because the presence of visible emissions is indicative of baghouse performance. If the baghouse is performing properly, then there should be no visible emissions. An increase in visible emissions indicates reduced performance of a particulate control device, therefore, the presence of visible emissions is used as an indicator.

The pressure differential was selected as an indicator because the pressure differential across a baghouse can be indicative of problems with the baghouse operation, such as broken bags, bad seals at the tube sheet, plugged ash hopper or plugged ash line. A high pressure differential can be an indication of plugged bags and a low pressure differential can be an indication of broken bags, both of which would affect the performance of the baghouse.

c. Rational for Selection of Indicator Ranges:

For visible emissions an indicator range of no visible emissions was selected. This level was selected because an increase in visible emissions indicates an increase in particulate matter emissions. When visible emissions are detected, corrective action will be initiated, beginning with reporting the excursion to maintenance. Corrective action will be initiated according to manufacturer's recommendations and any corrective action taken will be recorded in a log.

For pressure differential, indicator ranges were selected based on operating experience and manufacturer's recommendations. For Wheelabrator and Sly models, this range was identified as between 1 and 6" of water. For Mikropul models, the indicator range was determined to be 2 to 4" of water. This range was selected because a high or low pressure differential can be indicative of problems with the baghouse such as broken or plugged bags. Operating experience has lead to the development of site-specific operation and maintenance procedures. It has been the facility's operating experience that visible emissions are not generally present when the baghouse is operated between the ranges given above. When the baghouse pressure differential reads outside of this range, corrective action will be initiated, beginning with reporting the excursion to maintenance. Corrective action will be initiated according to manufacturer's recommendations and any corrective action taken will be recorded in a log.

APPENDIX H
Example Daily Inspection Log

Date of Inspection: / /

Equipment Identification	In Operation/ Full Production (Y/N)	Visible Emissions (Y/N)	Opacity Reading Conducted (Y/N)	Six- Minute Average	Manometer Gauge Reading ⁵	Within Acceptable Range (Y/N)	Investigate /Initiate Maintenance (Y/N) ¹	Routine Maintenance or Semi-Annual Inspection Performed (Y/N) ²	Any Excursion Reporting Required (Y/N) ³
P002 – Product Cooler CAM									
P003 – Primary Crushing CAM									
P004 – Raw Shale Storage Silos CAM									
P006 – Product Silos CAM									
P007 – Product Crushing CAM									
P008 – Lime Scrubber Feeder ⁴									
P012 – New Kiln Dust Silo CAM									
P014 – Extruder ⁴									
P018 – Kiln Dust Silo CAM	#1								

¹Baghouse shall be investigated if any visible emissions are seen or the manometer gauge is outside the acceptable range. Provide detailed information on the lines below

²The permit requires that routine maintenance be performed in accordance with manufacturer's requirements. The permit also requires semi-annual inspections of the baghouses. In addition to marking yes or no, indicate whether the action was routine maintenance or semi-annual inspection.

³Excursions are reported with the semi-annual reports. Excursions are anytime visible emissions are observed or the manometer gauge is outside of the acceptable range. Excursions only apply to CAM sources.

⁴Inspections for these sources need only be conducted on a weekly basis.

⁵Manometer gauge readings need only be taken on a weekly basis.

Comments (Investigation results and/or recommended maintenance): _____

Maintenance Action Completed on this Date: _____ Observer's Name: _____

Operating Permit 95OPJE084

First Issued: January 1, 2004
Renewed: November 1, 2011